

LIST OF CONTENTS

NUMBER 1

Dongyao Tan	1	A common algorithm for random vibration and vibration control analysis of dynamic systems
You-Min Huang and Daw-Kwei Leu	15	Finite element analysis of contact problems for a sheet metal bending process
Xu Xiwu, Sun Liangxin and Fan Xuqi	29	Stress concentration of finite composite laminates with elliptical hole
M. Stanuszek and P. G. Glockner	35	Further results on the response of spherical inflatables under axisymmetric hydrostatic loads
R. Cerioni, R. Brighenti and G. Donida	47	Use of incompatible displacement modes in a finite element model to analyze the dynamic behavior of unreinforced masonry panels
M. Sathyamoorthy	59	Nonlinear vibrations of moderately thick orthotropic shallow spherical shells
S. M. S. Alam, K. Yamada and S. Baba	67	A Kalman filter approach for galloping control of a bridge tower
G. Visweswara Rao	81	Optimum designs for transmission line towers
R. S. Bhatia and G. S. Sekhon	93	Generation of an exact stiffness matrix for a cylindrical shell element
Dong-Min Lee and In Lee	99	Vibration analysis of anisotropic plates with eccentric stiffeners
L. C. Musson and K. S. Surana	107	p -Version least squares finite element formulation for three-dimensional, isothermal, Newtonian fluid flow
T. K. Lakshmy and S. S. Bhavikatti	125	Optimum design of trough type folded plate roofs
I. Patlashenko and T. Weller	131	Two-dimensional spline collocation method for nonlinear analysis of laminated panels
J. B. Kosmatka	141	An improved two-node finite element for stability and natural frequencies of axial-loaded Timoshenko beams
M. A. De Rosa	151	Free vibrations of Timoshenko beams on two-parameter elastic foundation
X. A. Kong and D. P. Chen	157	An object-oriented design of FEM programs
L. T. Lee and D. C. Lee	167	Pressure exerted by a granular material along a curved channel

**Wang Quan, Zhi Yang
and Wang Dajun**

- Technical Note*
177 A note on wave control in lumped parameter system

I Software Survey Section

NUMBER 2

- Ming Xie and D. F. Adams** 183 Contact finite element modeling of the short beam shear test for composite materials
- A. K. H. Kwan** 193 Equivalence of finite elements and analogous frame modules for shear/core wall analysis
- M. Kojic, M. Zivkovic and A. Kojic** 205 Elastic-plastic analysis of orthotropic multilayered beam
- M. Hać and J. Osiński** 213 Finite element formulation of rigid body motion in dynamic analysis of mechanisms
- M. Ohsaki** 219 Genetic algorithm for topology optimization of trusses
- K. S. Dinno and B. B. Mekha** 227 A developed algorithm for the inelastic analysis of reinforced concrete frames
- M. R. Pranesh and A. S. Johnson** 233 Submarine pipeline routing software
- T. Mizusawa and H. Kito** 253 Vibration of cross-ply laminated cylindrical panels by the spline strip method
- D. I. Nwosu, A. S. J. Swamidas and D. O. Olowokere** 267 Local strain computation of crack initiation life of an unstiffened steel tubular T-joint
- Man Liu and D. G. Gorman** 277 Formulation of Rayleigh damping and its extensions
- A. Tesar and M. Drzik** 287 Genetic algorithms for dynamic tuning of structures
- I. L. Lim, I. W. Johnston and S. K. Choi** 297 A comparison of algorithms for profile reduction of sparse matrices
- B. B. Budkowska and C. Szymczak** 303 On first variation of extremum values of displacements and internal forces of laterally loaded piles
- Yong Fang and F. W. Liou** 309 Dynamics of three-dimensional multi-body systems with elastic components
- C. Gontier and Ying Li** 317 Lagrangian formulation and linearization of multibody system equations
- Ho-Soo Kim and Sung-Mok Hong** 333 Formulation of transition elements for the analysis of coupled wall structures

- F. Noel, J. C. Leon and P. Trompette** 345 A data structure dedicated to an integrated free-form surface meshing environment

Technical Note

- S. H. Tan, A. K. Soh and L. S. Ong** 357 Subassemblage with semi-rigid joint

I Software Survey Section

NUMBER 3

- M.-H. Herman Shen** 361 A new modeling technique for piezoelectrically actuated beams
- J. Jirousek and M. Stojek** 367 Numerical assessment of a new T-element approach
- Wei Huang and Yida Zou** 379 Finite element analysis on collision between two moving elastic bodies at low velocities
- H. Adeli and Hyo Seon Park** 383 A neural dynamics model for structural optimization—theory
- Hyo Seon Park and H. Adeli** 391 A neural dynamics model for structural optimization—application to plastic design of structures
- L. Jiang and J. B. Haddow** 401 A finite element formulation for finite static axisymmetric deformation of hyperelastic membranes
- Y. M. Desai, P. Yu, N. Popplewell and A. H. Shah** 407 Finite element modelling of transmission line galloping
- Chau-Chin Chang and R. L. Huston** 421 Computational methods for studying impact in multibody systems
- E. M. Galuta and M. S. Cheung** 427 Combined boundary element and finite element analysis of composite box girder bridges
- H. L. Soriano and C. C. Nunes** 439 Generalized linear relationship among displacements of frame structures
- Gin-Boay Chai and Kim-Tiow Ooi** 447 Analysis of vane-spring structures
- R. Zinno and E. J. Barbero** 455 Total Lagrangian formulation for laminated composite plates analysed by three-dimensional finite elements with two-dimensional kinematic constraints
- Y. Y. Yang and D. Munz** 467 Stress intensity factor and stress distribution in a joint with an interface corner under thermal and mechanical loading
- B.-Z. Huang and S. N. Atluri** 477 A simple method to follow post-buckling paths in finite element analysis

S. Anantha Ramu and V. T. Johnson	491	Damage assessment of composite structures—a fuzzy logic integrated neural network approach
M. R. Taheri and M. M. Zaman	503	Effects of a moving aircraft and temperature differential on response of rigid pavements
Chang-New Chen	513	Plastic buckling analysis by the continuum finite element modeling
J. P. Smith	527	Buckling of shear deformable plates using the p -version of the finite element method
Hui-Shen Shen and Zhong-Qin Lin	533	Thermal post-buckling analysis of imperfect laminated plates
Shyh-Chour Huang	541	Biomechanical modeling and simulations of automobile crash victims
N. Rajasekhara Naidu and G. Venkateswara Rao	551	Stability behaviour of uniform columns on a class of two parameter elastic foundation

I Software Survey Section

NUMBER 4

U. Icardi and A. M. Bertetto	555	An evaluation of the influence of geometry and of material properties at free edges and at corners of composite laminates
C. T. Dyka and R. P. Ingel	573	An approach for tension instability in smoothed particle hydrodynamics (SPH)
Geng Liu, Da-Wei He, Yun-Wen Shen and Ze-Yong Yin	581	Pseudo element method (PEM) for solving matrix with elementary operation and its application
H. R. H. Kabir	589	A shear-locking free robust isoparametric three-node triangular finite element for moderately-thick and thin arbitrarily laminated plates
A. G. Kolpakov and I. G. Kolpakova	599	Design of laminated composites possessing specified homogenized characteristics
C. Sam and P. Krishna Iyer	605	Nonlinear finite element analysis of reinforced concrete four-pile caps
A. Joseph Stanley and N. Ganesan	623	Impulse response of cantilever cylindrical shells with discontinuity in thickness subjected to axisymmetric load
Seong Min Jeon, Maeng Hyo Cho and In Lee	635	Static and dynamic analysis of composite box beams using large deflection theory

H. Fukunaga, H. Sekine M. Sato and A. Iino	643	Buckling design of symmetrically laminated plates using lamination parameters
A. SriVidya and R. Ranganathan	651	Reliability based optimal design of reinforced concrete frames
P. Majumdar, Z. H. Chen and M. J. Kim	663	Evaporative material removal process with a continuous wave laser
Th. B. Kermanidis and G. N. Labeas	673	Static and stability analysis of composite plates by a semi-analytical method
Rong-Sheng Chen and Pao-Chuan Wu	681	Approach of the special finite element for honeycomb composites
Y. Ezawa and N. Okamoto	691	Development of contact stress analysis programs using the hybrid method of FEM and BEM
R. I. K. Moorthy, A. Kakodkar and H. R. Srirangarajan	699	Chaotic response of a composite plate
Dongzhou Huang, Ton-Lo Wang and Mohsen Shahawy	703	Dynamic behavior of horizontally curved I-girder bridges
Xinwei Wang	715	Differential quadrature for buckling analysis of laminated plates
R. M. Lin and M. K. Lim	721	Natural frequencies of plates with arbitrary concentrated mass and stiffness modifications
Zhou Ding	731	Natural frequencies of elastically restrained rectangular plates using a set of static beam functions in the Rayleigh-Ritz method
		<i>Technical Notes</i>
M. N. S. Hadi and A. S. Watson	737	The manipulation of engineering design calculations by a calculation processing system: 1. Theory
R. W. Hopkins, J. L. Meek and F. A. Al-bermani	745	A simplified model for buckling mechanism in lattice structures

I Software Survey Section

NUMBER 5

Wenchao Zhang and A. G. Gibson	751	Finite element aided design of biaxial bending tests on oval sandwich plates
Peng-Li Shao	763	Solution of non-linear finite element problems with not well-conditioned stiffness matrices
M. D. Adley and D. G. Taggart	773	Dilute estimates of inelastic deformation in metal-matrix composites

Jeong Seo Koo and Byung Man Kwak	783	Post-buckling analysis of nonfrictional contact problems using linear complementarity formulation
E. Mahajerin and G. Burgess	795	Fundamental collocation method applied to plane thermoelasticity problems
Zhirong Feng and Karan S. Surana	799	p -Version least squares finite element formulation for three-dimensional, isothermal, incompressible, non-Newtonian fluid flow
Yook-Kong Yong and Young Cho	817	Higher-order, partial hybrid stress, finite element formulation for laminated plate and shell analyses
F. Paris, A. Blazquez and J. Cañas	829	Contact problems with nonconforming discretizations using boundary element method
U. S. Gupta, S. K. Jain and D. Jain	841	Method of collocation by derivatives in the study of axisymmetric vibrations of circular plates
You-He Zhou, Xiaojing Zheng and Issam E. Harik	847	A seminumerical method for buckling of sector plates
Y. H. Chen, W. S. Hwang, L. T. Chiu and S. M. Sheu	855	Flexibility of TLD to high-rise building by simple experiment and comparison
A. Venkatesh and J. Jirousek	863	Accurate representation of local effects due to concentrated and discontinuous loads in hybrid-Trefftz plate bending elements
M. H. Refaat and S. A. Meguid	871	On the contact stress analysis of spur gears using variational inequalities
S. S. Peres-Da-Silva, D. L. Cronin and T. W. Randolph	883	Computation of eigenvalues and eigenvectors of nonclassically damped systems
C. Chinosi	893	Shell elements as a coupling of plate and "drill" elements
S. V. Muthukrishna Selvam and C. Sujatha	903	Twist drill deformation and optimum drill geometry
K. R. Jayadevan and R. Narasimhan	915	Finite element simulation of wedge indentation
Jeng-Shian Chang and Wen-Jiann Chiou	929	Natural frequencies and critical velocities of fixed-fixed laminated circular cylindrical shells conveying fluids
		<i>Technical note</i>
N. R. Naidu and G. V. Rao	941	Vibrations of initially stressed uniform beams on a two-parameter elastic foundation

I Software Survey Section

NUMBER 6

S. Abrate and P. Newnham	945	Finite element analysis of triangular fins attached to a thick wall
M. Ap. Tzaferopoulos, E. S. Mistakidis, C. D. Bisbos and P. D. Panagiotopoulos	959	Comparison of two methods for the solution of a class of nonconvex energy problems using convex minimization algorithms
T. Aksu	973	A finite element formulation for shells of negative Gaussian curvature
C. Gontier and C. Vollmer	981	A large displacement analysis of a beam using a CAD geometric definition
B. Horowitz	991	Range and null space decomposition applied to analysis of slender concrete columns
M. Aydoğan and A. Y. Aköz	999	A numerical approach to define the rotational stiffness of a prefabricated connection and experimental study
I. Babuška, T. Strouboulis, C. S. Upadhyay and S. K. Gangaraj	1009	A model study of element residual estimators for linear elliptic problems: the quality of the estimators in the interior of meshes of triangles and quadrilaterals
P. Level, D. Moraux, P. Drazetic and A. Oudshoorn	1029	Some considerations on modal reanalysis of non-conservative dynamics systems by the generalized receptance method
G. Yu, Guang-Yau Tzeng, S. Chaturvedi, H. Adeli and Shao Qing Zhang	1035	A finite element approach to global-local modeling in composite laminate analysis
S. Wojciech	1045	Dynamic analysis of manipulators with consideration of dry friction
J. Kong and Y. K. Cheung	1051	Three-dimensional finite element analysis of thick laminated plates
G. D. Stefanou	1063	Dynamic response analysis of nonlinear structures using step-by-step integration techniques
Won-Man Cho, Sung-Kie Youn and Young-shin Lee	1071	A numerical and experimental study on the nonlinear behavior of laminated composite structural components
L. I. Dyatlovitsky, G. Cederbaum and L. Jakobson	1079	Refined version of the finite differences method in the theory of elasticity
<i>Technical Notes</i>		
H. R. Srirangarajan and H. Phaniraju	1107	Nonlinear vibrations of cross-ply plates

**B. S. L. P. de Lima,
B. P. Jacob,
N. F. F. Ebecken and
A. C. Benjamin**

- 1109 Portable FORTRAN programming tools in the
development of a structural analysis program

I Software Survey Section

- i List of Contents and Author Index for Volume 57,
1995

